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From The New York Medical Journal, December 31, 1887.

LETTERS TO THE EDITOR.

Professor Fauvel on the Vin Mariani.

13 RUE GUENEGAUD, PARIS, December 8, 1887.

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FEBRUARY, 1888.

No. 4.

ORIGINAL ARTICLES.

BRACHIAL PARALYSES.*

BY HENRY S. UPSON, M. D., CLEVELAND, O.

WITH the permission of the Society, I wish to give a brief account of brachial paralyses, in connection with a case of paralysis of some of the muscles of the forearm.

The patient, Mrs. Keefe, came to me December 5, 1887, complaining of a loss of power in the right wrist and hand. Her history, taken at the time, is as follows:

Patient has been in general healthy. In 1880 she began to have attacks beginning with numbness and tickling in the right hand ; these ran up the arm to the face, the lower lip twitched, but head and arm did not move. The tongue became thick, patient got words mixed, was sometimes unable to speak a word. There was then great pain in frontal and occipital regions, she felt nervous, occasionally vomited. Patient always knew attack was coming on by seeing lights before the eyes in spots. Occasionally had hemianopsia. Attacks came every month or so. She has had none since last February. At time of her mother's death she had hal-

* Read before the Cuyahoga County Medical Society.

lucinations in the night, thought she saw fairies and sisters of charity, but knew at the time that these were delusions. Has had some crying spells, and sometimes feeling of lump in the throat.

Last July, five or six months ago, she began to lose power in her right wrist, and this has been getting worse ever since. No tinglings, but some soreness in wrist, which came on after the paralysis.

Status Praesens—Complete paralysis of right extensor communis digitorum, extensor carpi radialis longior and brevior, and extensors of the thumb and little finger. Supinator longus acts well. No anæsthesia. No other paralyzes. Sight good. Fundus oculi normal. Pupils equal and react well. Knee jerk normal.

Patient has had no colic nor constipation. No specific history; patient has never used hair dye nor face powder. Has been in habit of drinking six or eight cups of coffee a day; no alcohol. Has no lead line on gums, takes good care of her teeth. Urine contains no albumen and no casts.

Our first problem is to determine whether the disease is organic or functional; if organic, whether the lesion is situated in the brain, spinal cord, or peripheral nerves.

In looking over the history we are struck at once with the similarity of the sensory attacks described by the patient, with those which occur in Jacksonian epilepsy, which is caused by disease in the cortex of the brain. In these attacks, first described by Hughlings Jackson, the convulsion usually begins in one of the extremities, 'say the hand, it may be that one of the fingers begins to move, the tremor is communicated to the others, then crawls up the arm, the face begins to twitch, and the patient then usually loses consciousness. The convulsion may become general or remain unilateral. In like manner a sensory aura may begin in one hand and creep up the arm, and this seems to be the fact in the case under discussion. Convulsive movements, however, have been nearly or quite absent, but the patient gives a fairly clear account of aphasia immediately afterwards, which

is especially interesting, as the symptoms exactly follow the positions of the arm, face and speech centres in the cortex. The nerve storm here began in the arm centre, passed through the face centre to the tongue centre, which is located, by most authorities, then to Broca's motor speech centre. Is this a paralysis of cortical origin, due to disease of the arm centre, and to be brought into connection with the sensory symptoms just described? To determine this it is necessary to make an electrical examination, and find or exclude the reaction of degeneration.

It is found that when a nerve is cut through, a degeneration of its fibres takes place below the point of injury, and at the same time there is an organic change in the muscles which it supplies. The same thing occurs from destruction of the large motor ganglion cells in the anterior horns of the gray matter of the cord. This change causes a difference in the electrical reactions of the muscles, called the reaction of degeneration.

A normal muscle reacts to both the Faradic and galvanic current with a sharp contraction, and the contraction on cathodal closure is greater than the contraction on anodal closure. The degenerated muscle does not react to the Faradic current; its contraction on galvanization is sluggish; the contraction on cathodal closure is usually weaker than that on anodal closure. These differences are shown in this table, and it is necessary to bear them in mind.

When motor fibres are cut across in the brain or lateral columns of the cord, the descending degeneration stops at the ganglion cells in the cord; these are not involved, and the muscles give no reaction of degeneration.

Examination in this case revealed the fact that the paralyzed muscles do not respond at all to the Faradic current; their galvanic excitability is markedly decreased; to the galvanic current their contraction is sluggish and very characteristic. Cathodal closure contraction is slightly greater than anodal closure contraction. That is, although the galvanic formula is not reversed, there is unmistakable reaction of degeneration.

We are therefore certain of an organic cause, which is not cerebral, but situated either in the cervical cord or in the musculo-spiral nerve.

The sensory attacks described above have no connection with the paralysis, but were probably auræ of migraine which regularly followed them.

The diseases which occur in the cervical cord are the following:

Acute polio-myelitis, or ordinary infantile paralysis. This is an inflammatory process involving the anterior horns of gray matter. It causes atrophy and reaction of degeneration, and usually runs its course without sensory symptoms. The disease may be ushered in with constitutional symptoms—chill, fever, convulsions, headache, delirium—but these subside within a week, and the paralysis then remains stationary or improves slowly. Excluded here, as this is a process which is decidedly progressive.

Progressive muscular atrophy is a chronic disease which causes paralysis with reaction of degeneration. It is due to a probably primary degeneration of the large motor ganglion cells of the cord. There are no sensory symptoms. It is here exceedingly improbable, because in it the small muscles of the hand are regularly the first ones affected, the atrophy showing itself in the dorsal interossei. Both hands are apt to be affected at about the same time.

Amyatrophic lateral sclerosis regularly begins in the cervical cord, and consists in a chronic degenerative change in the anterior horns of gray matter and in the pyramidal tracts. The first symptoms are stiffness of the muscles and increased tendon reflexes, weakness and fibrillar twitchings—a very different clinical picture from the one presented by this patient.

The hypertrophic form of pachymeningitis occurring in the cervical region of the cord, was first described by Charcot. It eventually leads to paralysis from pressure on the motor tracts; but this is preceded by local pain and tenderness, a prominent symptom also in affections of the meninges of the brain, and by paræsthesiæ and anæsthesiæ from interference

with the sensory posterior nerve roots. None of these symptoms are present.

Syringo-myelia regularly begins in the cervical cord and consists in the formation of a cavity around the central canal, from the breaking down of a new formation much like a glioma. Sensory symptoms are prominent, there being patches of anæsthesia, especially to heat and cold.

Tumors and abscesses of the cord cause by pressure sensory symptoms, and are apt to cause also a spastic condition such as is found in lateral sclerosis.

There remains the chronic form of polio-myelitis anterior. This is a progressive affection, without sensory symptoms, and gives rise to paralysis with atrophy and the reaction of degeneration. It usually begins in the lower extremities, and constitutes one form of the so-called ascending paralysis. It is theoretically possible that the paralysis in this patient is caused by such an inflammatory process, but the localization is not a typical one, and there is a form of peripheral disease which better explains the symptoms, as we shall see later.

Among the peripheral nerves the musculo-spiral is very often diseased, usually as a result of injury or the selective action of poisons. Traumatic paralysis may be caused by the pressure of a crutch in the axilla, in which case the triceps is paralyzed as well as the supinator longus and extensors; by pressure from the patient leaning on his arm when he is asleep, when the injury usually occurs half-way down the arm, between the triceps and biceps, and the triceps is usually spared; by a blow or cut. In all these cases the sensory as well as the motor filaments of the nerve are affected, and there is anæsthesia of the integument supplied by the radial, *i. e.*, the back of the radial side of the hand, of the thumb, and of the first two fingers as far as the second phalanges. In our patient this is not the case, and, furthermore, she gives absolutely no history of injury.

Multiple neuritis is a disease which has attracted much attention of late. It is an inflammation occurring along nerve trunks, and causes paralysis with atrophy. But the paralyses are irregularly distributed, and sensory symptoms

are always present and are apt to predominate. The same may be said of paralysis resulting from pressure on a nerve by tumor or aneurism, and of the variety caused by the so-called rheumatic neuritis.

There remain the paralyzes of toxic origin, and of these, that caused by lead is the most frequent. This is an affection which begins insidiously with weakness in the extensor communis digitorum muscle, and the neighboring extensors soon become involved. There is, then, as in this case, atrophy with the reaction of degeneration, very rarely pain, tingling or anæsthesia. There is another peculiarity of lead palsy which is much relied on to distinguish it from that due to injury of the nerve, namely, the exemption of the supinators. The supinator brevis is not accessible. In order to see whether the supinator longus is paralyzed or not, it is simply necessary to cause the patient to flex the forearm on the arm, with the hand in the position of pronation. *Thus.* You see at once that this patient's supinator longus acts well.

For both these reasons we exclude nerve injury and ordinary forms of neuritis. But we have already excluded functional and cerebral troubles, and all spinal diseases except one, namely, chronic polio-myelitis anterior. But that affection, as pointed out, is very rare; it usually begins in the lower extremities; it may affect a group of muscles which habitually act together, but rarely, if ever, an isolated group of muscles supplied by one nerve. It is a much less violent supposition to consider this paralysis as toxic, due to the ingestion of lead.

Inquiry has as yet failed to find out the source of the poison. A visit to the home of the patient brought out the fact that she has used tin and granite-ware coffee and tea-pots, some of which, she stated, turned the coffee black. Chemical tests applied to these in a way suggested by Professor Morley, have failed to show any lead in their composition, and in the absence of other testimony we must consider, either that there has been sufficient lead to cause poisoning in the drinking water, which patient states comes through a lead pipe, or that the cause is one which has

evaded our observation, but which we may later bring to light. In regard to poisoning from lead pipes, there are a few observations of this kind on record, although they are rare. The patient states that she has not been in the habit of letting the water run for a time before using it, but she has now been instructed to do so.

No examination of the urine for lead has been made, owing to the inconveniences which attach to a sulphuretted hydrogen apparatus.

The absence of the lead line on the gums is the rule with patients who are in the habit of brushing their teeth.

Although it is the rule for both arms to be affected, cases are not rare in which both legs, or one arm alone, or an arm and a leg suffer. Buzzard records a case in which the right arm and left leg were the only seats of paralysis, and from this curious arrangement the diagnosis of hysteria had been made. Electrical examination showed the presence of the reaction of degeneration in the affected muscles. The same patient had no lead line and no colic.

The pathology of lead paralysis is still a moot point. All observers are agreed that there is an organic lesion, and that the muscle fibres undergo atrophy in the same way that they do after section of a nerve. The muscle fibres become smaller in calibre, there is increase in the number of nuclei, in fat and in connective tissue.

Changes in the spinal cord have been found by some observers. The latest researches are those of Schultze of Heidelberg. He found in a number of cases the spinal cord healthy, the musculo-spiral nerve the seat of a well-marked inflammation. How and why the inflammatory process attacks only the motor fibres is unexplained, as is the selective action of the poison in affecting only the radial nerve. This fact has its analogue in neuralgia, especially that affecting the sciatic nerve, caused by a neuritis which affects only the sensory filaments.

The treatment which has been followed in this case is the one familiar to you all. Potassium iodide has been given internally to hasten the elimination of the poison; the affected

muscles have been treated twice a week with the interrupted galvanic current. Slight improvement has been noticed in the motility of the thumb and little finger, and the muscles seem to respond to the current a little better than at first.

The prognosis was a cautious one on account of the decided lowering of galvanic excitability and the long-standing of the complaint. We may tell a patient who presents so marked a case of the reaction of degeneration, that the affair will be one of months, and that a complete recovery is doubtful.

DISCUSSION.

Dr. Bennett said that he had observed an interesting peripheral nerve affection on himself. Some months ago he noticed a weakness in the muscles supplied by the ulnar nerve on the right side. He noticed a difficulty in writing for any length of time. There have been tingling sensations and anæsthesia over a corresponding area, but rather more, he thought, in the deeper structures than in the integument. He was disposed to attribute the difficulty to a slight neuritis of rheumatic origin. All these symptoms are improving.

Dr. Vance had been in the habit of considering lead paralysis as a bilateral affection. He had listened attentively to the description of the case, and it had made on him rather the impression of an injury of some sort to the musculo-spiral nerve.

Dr. Upson, in closing the discussion, wished especially to emphasize the fact that there had been in this case no history of injury of any sort, no anæsthesia, and that the supinator longus is not involved.

VESICO-VAGINAL FISTULA.

BY REUBEN A. VANCE, M. D., CLEVELAND, OHIO.

THERE are no accidents connected with parturition more distressing in their immediate results or more destructive to the health and happiness of the victims than vesico-vaginal fistulæ. In constant misery from the unchecked flow of urine, with ulceration and abscesses undermining their physical stamina, their bodily sufferings are almost beyond endurance; yet these are slight afflictions contrasted with the shipwreck of family and social life attendant upon lesions of this character. Disgusting to themselves and offensive to those about them, these unfortunate sufferers, when not relieved by surgical interference, can look to death only for escape from their miserable lot.

In order to understand the nature of these lesions their causes must be glanced at. And here, as but too frequently is the case elsewhere in practical medicine, bad logic and worse reason have been employed in explanation of the etiology of vesico-vaginal fistula. The history of some of these cases can frequently be summed up in the statement that the given patient was long in labor, that counsel was summoned, instruments employed, and ten days or a fortnight subsequently incontinence of urine manifested itself, an examination revealing an opening between vagina and bladder. In the popular mind the connection between the instrumental aid afforded and the subsequent fistula is clear and unmistakable; fortunate indeed is the operator if he has no reason to suspect that the practitioner to whose call he responded and whose patient he relieved has not directly or indirectly given his professional sanction to the popular view. Again, the use of instruments is immediately followed by escape of urine—in this case there can be but little doubt as to the agency of the former in the production of the fistula. Finally, in exceptional cases, fistulæ occur after non-instrumental labors, although the latter may not have been very difficult or much prolonged. In explaining these various cases it must be borne

in mind that there are three distinct forms of vesico-vaginal fistulæ. In one a slough, due to pressure and consequent interruption of circulation, is the cause; occasionally the forceps by lacerating or dislodging a softened mass of necrosed tissues and opening an avenue for the immediate discharge of urine may seemingly obscure the etiology of a given case, but a little attention will render the matter clear. In others the instruments, by mischance, negligence or unskillfulness, penetrate the septum and open the bladder. These are as clearly due to traumatism as the former are to long continued pressure. In the third class of cases—fortunately of rare occurrence—ulceration of uncertain origin attacks the tissues between bladder and vagina, and a fistula forms.

There is a practical distinction of vast importance between these various fistulæ. Broadly it can thus be stated: An opening between bladder and vagina due to loss of tissue from sloughs or ulceration has little tendency to close—if much tissue has been destroyed it is never united by the unaided efforts of nature; in traumatic fistulæ, on the contrary, the tendency is towards recovery, and in the vast majority of cases the opening is healed spontaneously. When, therefore, the bladder is perforated by the forceps or other obstetrical appliance, unless pressure or disease shall have already impaired the vitality of the tissues so that the opening is made through what will in time be a slough, bad as the immediate symptoms may prove and distressing as the patient's state may be for a time, yet the prognosis is so good that the fears of the friends may be allayed and a cure by the unaided efforts of nature safely promised.

It's a trite saying that no two grains of sand are alike; it's certainly true that no two cases of vesico-vaginal fistulæ have more than a superficial resemblance. With a restricted area in which to locate themselves, classifications on paper must necessarily arrange these lesions under similar headings. Consequently an artificial similarity founded on names is formed that may prove misleading. Fistulæ alike in size and situation are found to have no essential similarity when it comes to treatment. The experienced operator looks to

other things than location and extent when striving to form an opinion as to the curability of a given case. And these are the complications due to varying amounts of destruction of tissue effected by the agency that originally produced the opening between the genital passages and the vesical cavity—complications that at the time the patient presents herself to the operating surgeon have resolved themselves into bands of cicatricial contraction. The slough that penetrates the septum at a single spot may branch and ramify in a dozen directions without destroying the whole thickness of the wall; numerous necrosed masses may be dislodged at various points that implicate only the surface. Yet wherever the tissue is injured there a cicatricial band will subsequently be located about which but one thing can certainly be foretold—that is, that it is sure to contract. Where the septum has been penetrated there at first will be an irregular opening; under the reparative process this will contract and grow smaller until a point is reached where the agencies that would render the opening smaller are just balanced by the contractile qualities of the radii of cicatricial material that center in the fistula; then a struggle ensues in which the previously circular character of the fistula alters under the traction to which it is subjected, and both bladder and vaginal cavities become strongly changed by the new forces thus brought into action. But other agencies than those alluded to speedily come into play. The bladder, no longer susceptible of distention, is the subject of fatty substitution in its muscular wall. The vagina, distorted and contracted by scar tissue, is constantly irritated by the decomposing urine that pours through it. Sabulous material deposits itself on every breach of surface, and unless speedily removed ulceration ensues beneath it and abscesses develop in contiguous parts. As the natural tissues are thus undermined and destroyed, cicatricial material takes their place; the distortion of the vagina increases, its calibre diminishes, the bladder grows smaller, the fistula seems fixed to one or other ramus of the pubes, and the surgeon to whom the case is presented in this stage finds all natural boundaries obscured, and it is

a work of weeks to obtain a view of the edges of the fistula through the wreck of pelvic structures.

The first step in any effort to relieve these patients must be towards establishing a natural condition of the vagina. The sabulous material must be removed, the excoriations treated, the ulcerations and abscesses cured. The contracted vaginal walls must be stretched and projecting contractions cut. Pressure will remove induration and appropriate medication check the tendency to renewed deposits. These matters, however, are best portrayed in connection with cases actually treated.

Some curious reflections might be made on the history of the operation for vesico-vaginal fistula, for the steps whereby a procedure but a few years since confessedly the most difficult and uncertain in surgery has become safe, sure and reasonably easy, cannot be otherwise than interesting. In this country four names demand consideration—Hayward, Mettauer, Sims and Bozeman. Hayward of Boston directed ordinary surgical methods to the cure of these fistulæ, forcibly brought the lesion into view by a whalebone bougie introduced through the urethra, dilated the vaginal outlet, pared the edges of the fistula, united them with interrupted silk suture and used a special catheter to keep the bladder empty during recovery. Mettauer of Virginia employed metallic sutures. Marion Sims of Alabama invented a speculum that enabled him to operate with the patient prone and the fistula in normal relation with adjoining parts. Nathan Bozeman, also of Alabama, introduced the button suture, the speculum known by his name, and a chair which enables the operator to avail himself of the right angle position for his patient. He also systematized a preparatory treatment that rendered ordinary cases more readily curable and brought into the domain of possible cure many patients who otherwise would have been subjected to destructive operations as susceptible of relief in no other way. The name of Sims became a household word in both continents—Bozeman is known the world over for his success as an operator in these cases. Yet a little investigation shows

that long before the day of Sims and Bozeman, Wutzer of Bonn operated with his patients on their hands and knees, and used a perineal retractor to expose the fistulæ; while Gosset of London in 1834 placed his patient on her knees and elbows, and after exposing and trimming the edges of the opening, closed the fistula with metallic sutures and effected a cure after a single operation. Truly the words of Sydney Smith were never more appropriate than when applied to the originators of this procedure: "That man is not the first discoverer of any art who first says the thing, but he who says it so long and so loud and so clearly that he compels mankind to hear him—the man who is so deeply impressed with the importance of his discovery that he will take no denial, but, at the risk of fortune and fame, pushes through all opposition, determined it shall not perish for want of a fair trial."

Other investigators reaped valuable grain in this field. Jobert employed traction on the uterus and repeated incisions in the cicatrized vagina as a means of freeing adherent parts and apposing the rigid, widely-separated edges of fistulæ due to sloughing of the genital passages; while Simon, working on the old lines, showed that ordinary surgical devices sufficed for the cure of the vast majority of these patients. The career of the latter is extremely instructive. Without the position, the speculum, the suture, the catheter or the preparatory treatment of the American operators this wonderful German surgeon attained a success second only to that of Bozeman, and forever emphasized the too frequently forgotten fact that it is the skill of the surgeon that effects a cure, and not the elaborate devices of the mechanician or the peculiar character of the appliances employed.

The following cases illustrate many points of interest in this department of surgery. They will be detailed at sufficient length to render clear the necessity of the preparatory treatment, the peculiar nature of the given case and its special complications, the character of the operation performed and the reason for its selection. Subsequently some reflections will be appended upon the various procedures for the

cure of vesico-vaginal fistula soliciting surgical favor at the present time, and an endeavor made to estimate the value of each.

[*To be continued.*]

METHODS OF MEDICAL STUDY.

BY C. F. DUTTON, M. D., CLEVELAND, OHIO.

HAS not the time fully come when the attention of the medical profession should be called to methods of medical teaching? Are our present methods faulty? If so, is there "a more excellent way?" Let us consider a little. In all our colleges didactic lectures occupy the time for the most part. Clinics and quizzes are sandwiched in, but the published time schedules which fairly represent the plans pursued in all or nearly all the courses of study, show that lectures (so-called) are the sources from which the student is expected to acquire professional knowledge. On five and sometimes six days of the week he is required to listen to these from four to seven hours daily, with the exception of the few minutes allowed between lectures for change of teachers or lecture rooms. He is also expected to attend clinics, quiz classes, etc., as they may occur during the week. It does not become me to estimate the value of the lecture as ordinarily given, but may I not be permitted the query whether, as a general thing, all that is presented by the average medical teacher during the hour, which is of real value, might not in most cases, if properly condensed, be more efficiently said in fifteen minutes, leaving the remainder of the hour to be more profitably spent in some other way? I think you will agree with me in this—that if each lecture is pregnant with thought and rich in information, more mental pabulum will be furnished to the student than he can possibly appropriate or mentally digest. If it is *not* rich and instructive, to listen to it is a waste of precious time, and the student fails to receive his "*quid pro*

IMPORTANT *New* REMEDIES.

PIL. TERPIN HYDRAT. "W. H. S. & CO." 2 Grains each.

A new and potent remedy in the treatment of coughs, catarrh, bronchitis, and kindred diseases.

Terpin Hydrate is in the form of colorless monoclinic crystals, melting at 100° C. and has the composition $\text{C}_{10}\text{H}_{20}\text{O}_2$.

It was first prescribed in France by Lepine, who recommended it as an expectorant, Guelpa took 4 grammes in 12 hours, and Jeannel prescribed 2 grammes per day, for several weeks in succession, without the least sign of intolerance.

Jeannel and See found it useful in Bronchial affections, and Vigier in the same disease recommends it to be taken in pills to the extent of one or two grammes per day.

Dr. Halstead Boyland (*vide* "The Medical Record," Sept. 24th, 1887,) speaks very enthusiastically of Terpin Hydrate, and after quoting several cases in which it has been exhibited with marked success, thus concludes: "It has proved eminently satisfactory in my hands in every case in which I have used it, and I now prescribe it freely in all Coughs, Colds, and Catarrhal affections, as well as in Bronchial troubles generally, wherever elimination is indicated, and should advise its administration in Asthmatic Dyspnoea in doses of 2 grains every 15 minutes until 10 grains have been taken or relief had been obtained. It has already proven itself of great utility in the treatment of diseases of the respiratory tract, and must be conceded to be a valuable addition to the Pharmacopoeia."

We have submitted our Pills of Terpin Hydrate to physicians of eminence, and from all who have had opportunities of trying them the remedy has received their unqualified approval.

In a case of chronic bronchial catarrh, the patient being a very stout lady, the relief was immediate, the cough easier, sleep quite normal, and expectoration free.

PIL. HYDRARGYRUM TANNIUM OXYDULATUM. "W. H. S. & CO."

(MERCURY TANNATE.) 1 GRAIN EACH.

Mercury Tannate was first prepared by Dr. Sigmund Lustgarten in the Pathologic-Chemical Institute of Prof. E. Ludwig, in Vienna.

It is a greyish-green powder, containing at least 40 per cent. of Mercury, and is absorbed by the system with great rapidity due to the fine separation of the Mercury; at the same time it is free from the disagreeable symptoms accompanying the use of other mercurial preparations.

Dr. Lustgarten submitted his experience with Mercury Tannate to the Imperial and Royal Society of Physicians in Vienna, January 4th, 1887, showing that it possessed mild antisyphilitic properties, seldom producing salivation, stomatitis, or diarrhoea, which so often follow the administration of the Chloride, Bi-chloride, Protiodide, and Biniodide forms of Mercury.

Doctors Shadeck, Leblond, Dornig, Person, Borowski, and Lesser, and Professors Lang and Finger, all write approvingly of Tannate of Mercury.

We have placed the Hydrargyrum Tannicum Oxydulatum in the hands of several eminent physicians, connected with hospitals of New York, for trial, so that a verification might be obtained of the foregoing testimony. From reports already received it seems well worthy of a more extended trial. We now offer it to the medical profession in the form of our soluble pills containing one grain each.

PIL. SALOL. "W. H. S. & CO." $\frac{2}{3}$ and 5 Grains each.

A new remedy for rheumatism and rheumatic affections, possessing all the advantages of Salicylic Acid and Salicylate of Soda, while not causing any of their objectionable effects.

This valuable remedy was introduced by us to the medical profession several months since, to whom we offered it in pill form in strengths of $\frac{2}{3}$ and 5 grains to each pill.

"Salol" or "Salicylate of Phenol" was first introduced by Professor Von Nencki of Berne, and first brought to the attention of the medical profession in a communication by Dr. Sahli to the Medico-Pharmaceutical District Society of Berne, at its meeting held in that city on April 6, 1886.

Salol is composed of 40 per cent. of Phenol (Carbolic Acid) and 60 per cent. Salicylic Acid; a very faint odor of Carbolic Acid is characteristic of pure Salol.

We are now revising our TREATISE on Salol, in which we intend to incorporate the latest experience acquired in the treatment of the several diseases for which Salol is indicated.

This TREATISE will be mailed on application.

W. H. SCHIEFFELIN & Co., 170 & 172 William St., N.Y.

IN PRESCRIBING BE PARTICULAR TO SPECIFY W. H. S. & CO.'S.

[Form 2.]

Carnrick's Soluble Food

Is the only Infants' Food manufactured that perfectly nourishes the child without the addition of cow's milk. We do not except the so-called Milk Foods, for they contain but a *very small percentage* of the solid constituents of cow's milk. Most of the credit given to prepared foods belongs to cow's milk, which must be added to them or the child would starve.

Carnrick's Soluble Food is composed of about equal proportions of the solid constituents of cow's milk, partially digested, and wheat flour, the starch of which is converted into dextrine and soluble starch.

Thomas H. Rotch, M.D., Instructor in Diseases of Children, Medical Department of Harvard University, in the *Boston Med. and Surgical Journal*, Sept. 29, 1887, says: "Cow's milk is the universal menstruum of Infant Foods all over the world, and is the *actual food* which the infant is getting; hence it is irrational and unfair to speak of and give the credit to the various artificial foods, when we really should speak of cow's milk, with its modification to a greater or less degree by certain adjuvants under the name of Infant Foods, which all supply about the same variety of ingredients in common; such small amounts of these ingredients as to be of little benefit in nourishing the infant, *and would not nourish it unless aided by cow's milk.*"

CARNRICK'S SOLUBLE FOOD

is positively the only Infants' Food manufactured to which the foregoing criticisms do not apply.

BEEF PEPTONOIDS.

(CONCENTRATED BEEF AND MILK WITH GLUTEN.)

Is the most concentrated and easily digested nutrient that has ever been introduced to the medical profession. Beef Peptonoids in the form of a powder is not a pure peptone, only one-fourth being digested. We are confident that you will find Beef Peptonoids in all cases where you desire a concentrated and easily digested food superior to any preparation in the market, or that can be prepared in the household.

The following are the opinions of most eminent authorities in the world:

Prof. Atfield says of Beef Peptonoids: "It is by far the most nutritious and concentrated Food I have ever met with."

Prof. Stutzer says: "When the formation of flesh and blood is to be promoted and vigor infused into a patient, Beef Peptonoids for this purpose stands first and foremost amongst all the preparations I have examined."

LIQUID PEPTONOIDS

Is presented in the form of an elegant Cordial, containing twenty per cent. of spirits. Its nutritive constituents are wholly digested. It will agree with patients who reject all other foods.

Peptonized Cod Liver Oil and Milk

IS SUPERIOR TO OTHER PREPARATIONS OF COD LIVER OIL:

Because the *division of the oil globules is from twenty to one hundred times* finer than any other preparation of Cod Liver Oil ever produced, and consequently brought nearer the condition required for assimilation.

It is predigested, and is, therefore, more easily retained by weak and enfeebled stomachs and eructations are less liable to follow.

Samples sent on application by

REED & CARNRICK, N. Y.

quo." In any case, will not the young man who has patiently sat during so many hours as the passive recipient of instruction find himself in the condition of Munchausen's horse, which, headed up stream, to the surprise of his rider, while drinking took in the whole stream, but continued to drink without any sign of stopping until his master, wondering how the beast disposed of so much water, looked behind him and found to his astonishment that the latter half of the animal had been cut off by the fall of a portcullis as he passed out of the city and the stream was simply running through him. So even the water he received did not satisfy him.

The comparison does not hold in this, viz., that the rills of knowledge which have sprung from these various sources do not collect into one stream or even run through his mental digestive apparatus, but, on the contrary, strike him at various angles and run off like water from a duck's back.

May I not query again whether a large part of the instruction as now given by lectures is not dry and uninteresting from want of definiteness, simplicity, clearness; and having been obtained largely from books by the lecturer, might it not be better learned from books by the competent student? The object of medical study is not so much to educate the mind as to acquire medical knowledge. The medical student is presumably well educated before he begins the study of his profession. If he is not, he ought to be, and no method should be adopted which makes special provision for the uncultivated mind. The habit of study and the ability to use books should be acquired by every candidate for the medical or any other profession before he is permitted to enter upon its special study. Again, is it good economy of time for first, second and third year students to attend the same lectures? If the lecture is adapted to the first year student, is it not A, B, C over again to the third year student? Or if it is adapted to the third year student, is it not for the most part beyond the first year student? Might not each, while he learns something by the common plan, be better taught and make more rapid progress by membership in a

class of his own grade? Why should medicine be taught in this miscellaneous way, while in all other departments of scientific instruction primary importance is attached to classification? May it not be proper also to enquire whether it is profitable for any student of whatever mental capacity to pursue so many branches of study at once? Those most familiar with teaching tell us that three solid studies are as many as can be pursued at once in other schools, and the courses of studies in our scientific and literary institutions everywhere are arranged on this plan. By what principle do we make medicine exceptional in this respect? Might not the professors in our medical colleges learn much to their profit by consulting more frequently those who have studied more specifically the principles and art of teaching? Our colleges are attempting, and in a measure succeeding, in elevating the standard of medical education, but so far as I am aware, this has been done more by multiplication of departments than by improved methods of instruction. More lectures are given now than formerly, where fewer might be better. The stuffing processes are the same now as ever. The student is seldom expected to *prepare* a lesson. He has no time. He often cannot know the topic even of the next hour. Nor has he time to review carefully a lecture after he has heard it. He frequently does not so much as own or have access to the books which treat of many subjects presented to him. His preparatory studies with his preceptor have, in most instances, been pursued also in a desultory way. Preceptors *precept* very little, and the facts are that medical students, as a rule, from the time they enter a preceptor's office until they are honored by their M. D. degree, have little opportunity to receive careful, methodical scientific teaching. Nor would the majority of them pass muster at all, if the same accuracy of knowledge was required of them in medicine and surgery at time of graduation that is required of students before they are allowed to graduate from other schools of learning. If these statements are untrue, I beg some better informed friend of the present system, or no system, of medical study to correct them. If they are true, ought there not to be wisdom sufficient to enable the fraternity to find a more excellent way?

The Cleveland Medical Gazette.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY

ONE DOLLAR PER ANNUM IN ADVANCE.

Vol. III begins with November, 1887. Subscriptions can begin at any time.

REMITTANCE OF MONEY.—All money should be sent by P. O. Order, Postal Note or Registered letter. In no case should money be sent by check, except on New York or this city.

Original Communications, reports of cases and local news of general medical interest are solicited. All communications should be accompanied by the name of the writer, not necessarily for publication.

All letters and communications should be addressed to the CLEVELAND MEDICAL GAZETTE, No. 143 Euclid Avenue, CLEVELAND, OHIO.

Changes for advertisements must reach us not later than the second week of the month to be corrected in current number, addressed to W. N. GATES, Manager Advertising Department, 10 Public Square.

EDITED BY A. R. BAKER AND S. W. KELLEY.

EDITORIAL.

THE CLOSING SESSION IN THE MEDICAL DEPARTMENT OF WESTERN RESERVE UNIVERSITY.

The winter's work at this school has gone steadily along until now the session is drawing to a close. This session has been distinguished from its numerous predecessors in several particulars. First, it was observed that the class assembled much more punctually at the opening of the session, the number having enrolled upon opening day being larger, and larger in proportion to the whole number who have attended this course, than was ever known before. Then again, in looking over the register one sees that the A. M.'s, M. D.'s, B. S.'s and A. B.'s are on the increase. Furthermore, alumni who have visited the school this winter were disappointed at not getting an opportunity to witness a cushion-throwing stampede, a free-for-all catch-as-catch-can wrestling match on the rostrum, or being enlivened by a harmonious

rendering of "John Brown's Body," "Saw My Leg Off," and other classical selections. They sighed in memory of the good old times, shook their heads ominously and feared that the jolly harem-scarum, grave-robbing, kidnapping, sky-larking breed of "bone-pickers" was becoming almost extinct. Another noticeable feature has been the recitations instead of lectures, which fashion seems to be coming more and more into vogue each year, and is now employed at this school in all elementary branches. And lastly, now that the end of the term is drawing near, there is not so early a thinning of the ranks by the juniors dropping out before the close. More of the juniors are going to stay through the examinations and commencement exercises to "see how it's done," and more than ever before are going to take the spring course.

Examinations begin on Monday, February 27, and continue all the week. There are fifty-four candidates for graduation.

March 7 is commencement day. At two P. M. of that day will occur the meeting of the Alumni Association. An unusually large attendance of alumni is expected and the symptoms are strong for a meeting of uncommon interest. Dr. G. C. Ashmun is President this year, and will address the association. The orator of the day is Dr. W. A. Knowlton of Brecksville, and the poet, Dr. L. S. Ebright of Akron, and they will both doubtless acquit themselves with honor.

The subject for discussion is "Antiseptics in Midwifery," but we doubt very much whether anything profitable will be evolved under this order of business. Not that the members are not capable of handling any medical subject, but because the occasion is not suited nor the time sufficient for discussing a question of purely scientific interest. Members have felt and found this to be true, and we think it would greatly benefit the association to abolish the discussion and occupy the time instead in calling for representative men from each class in chronological order and listening to remarks and reminiscences from those who respond to the roll-call.

COMMENCEMENT EXERCISES

Proper will be in the evening, also at the college. The order of exercises will be—Prayer, an elaborate musical programme, an oration by Dr. T. Clarke Miller, the valedictory, and then President Hayden will present diplomas to the successful fifty-four? fifty-two? forty-seven? forty?—it would be an immense saving of nerve force to know now how many.

OHIO'S SANITARY CONVENTIONS.

Sanitary conventions have been held at Akron and Toledo during the last four weeks. That at Akron (January 25 and 26) was under the care of the State Board of Health, while the one at Toledo was the annual meeting of the Ohio State Sanitary Association. The topics presented and discussed were similar at both of these meetings and covered a wide range. The attendance was fair in numbers and character, but not large. Great interest was shown at both meetings in "School Hygiene," including physical, educational, moral and æsthetic elements, with papers presented and remarks upon them which were full of evidence that school life was regarded as most important. One of the best features of these conventions and similar gatherings is the contacts they bring about between all classes interested in such matters. Physicians, "health officers" and all others can here present questions and make statements of conditions which have a common interest and bearing upon individual and community life. At the Toledo meeting Professor Vaughn of Ann Arbor, Michigan, gave an interesting lecture on "Food Substances," not attempting to cover the whole field, of course, and avoiding technical terms as much as possible. A fair number of mechanics and other muscle-users were present and appeared very much interested in the food subject. The lecture certainly added to the information of all who heard it in one way or other. And the best outcome of such meetings is probably in the information and interest they impart.

QUACK ADVERTISEMENTS IN RELIGIOUS
NEWSPAPERS.

We have had occasion to call attention to this subject in a previous number of the *GAZETTE*, and take pleasure in quoting the following editorial from a recent number of the *Medical and Surgical Reporter*, which we hope will result in correcting this abuse of the advertising pages of religious newspapers:

"From time to time medical men and medical journals have protested against the prostitution of the columns of religious newspapers to the use of advertisers of quack nostrums. This protest does not apply to temperately worded representations of what seems to have been accomplished by, or what may reasonably be expected of, a remedy or device for the cure of disease or injury. But it does apply to advertisements couched in language which bears the stamp of falsehood on its face, or which is of such a character as to arouse suspicion in the mind of an intelligent man, uninfluenced by a money consideration.

"The editors of most religious journals are, as a rule, men of so much intelligence that they will hardly attribute to trade-jealousy alone the objection which medical men have to the recommendation of 'sure cures' for baldness, fits, rupture, consumption, and so on, to persons who are apt to regard their religious teachers as safe guides in matters of health or disease; and who are not sufficiently familiar with the subtleties of the newspaper business to distinguish between the responsibilities of the editor and those of the publisher. As a fact, most readers of periodicals have the impression that the advertisements they contain are endorsed by the editor. Advertisers rely upon this fact; and we cannot understand the casuistry which satisfies the conscience of a man who edits a periodical, ostensibly devoted to religion, which replenishes its coffers with the price of palpable falsehoods.

"If it were true that a religious paper could not be financially successful without taking money for the advertisement of worthless or delusive remedies, a course might be suggested worthy of the main object of these papers. But it is not true, for there are a few happy illustrations of the fact that, even in a religious newspaper, 'honesty is the best policy.'

"We call the attention of our large circle of readers to this matter, in the hope that they will use their influence to

put an end to what we regard as a serious blemish in religious newspapers, and one which injures the good reputation which they ought to enjoy. And we call the attention of those religious newspapers to which our remarks may apply to this matter, in the hope that we shall not have to recur to it in a more explicit manner."

BYFORD ON NEURASTHENIA.

In Byford's 'Diseases of Women,' page 352, we read: "Neurological writers, among whom are Drs. Weir Mitchell, Beard and Professor Jewell, ascribe neurasthenia to an exhausted state of the nerve centres. If I rightly understand what they mean by this it is that the brain and spinal cord have become damaged by overaction. I do not mean by *damage*, structural lesion, but a condition, in which the cell action is slow, labored and painful because the parts have been overworked, and according to this method of interpreting the symptoms they prescribe rest as one of the essential parts of the cure. This is so different from the way I look at the subject, that I will risk a concise statement of my views.

I think that the nerve centres do not become exhausted, but that the blood circulating through them does become exhausted of the material necessary to promptly renew the loss during functional action of the nerve centres. On account of the want of general vigor the heart and arteries may not transmit the blood through them in the usual quantity, but if the circulation is not deficient in quantity the blood itself is deficient in quality. With a deficient supply of nutritive material their functions are performed irregularly and imperfectly, and there is neurasthenia."

"If my explanation of the origin of neurasthenia is correct, absolute rest is not so important to the cure as full feeding."

Is not here attempted a distinction without a difference? None of the writers mentioned claim that the nerve centres get their nourishment from any other source than the blood, and in Weir Mitchell's rest cure he does not claim that the rest is more important than the feeding. No one supposes

that rest is going to nourish the nerve centres, but only prevent their expending force as fast as they acquire it.

The rest cure, in its strictest form, is not urged as absolutely requisite to patients who are still vigorous enough to take active exercise, but to such as are so debilitated that to expend force in active exercise would leave them none in reserve.

A prominent feature of the rest cure is exercise, that is, passive exercise, by means of "electricity and massage, the object being to get the effects of exercise upon the nutrition and circulation without the expenditure of the patient's nerve force" (H. C. Wood).

Dr. Byford says the nerve cells "become anemic, and in this way nervous exhaustion occurs, and we have with the original sympathetic symptoms or succeeding them, neurasthenia."

What is the difference between this and ascribing neurasthenia to "an exhausted state of the nerve centres," as he avers Mitchell, Beard and Jewell do?

The point agreed upon is that the nerve centres expend force too fast in proportion to their acquisition of force (as a matter of course, from their only source of nourishment, the blood), and while Byford's plan of full feeding with active exercise aims to increase the income to the nerve centres, it fails to equally limit the expenditure. It is adapted to a certain class of cases not extreme in their degree of neurasthenia. The so-called "rest cure," full feeding, with passive exercise, not only increases the supply of nourishment to the exhausted nerve centres, but limits to the utmost their expenditure until such time as they have grown rich in strength and can afford it. It is practicable and has been proven eminently useful in cases where systematic active exercise was attempted in vain or was out of the question.

Why not give Drs. Weir Mitchell, Beard and Professor Jewell due credit for what they have done?

New Books and Pamphlets.

THE PRACTICE OF MEDICINE AND SURGERY APPLIED TO THE DISEASES AND ACCIDENTS INCIDENT TO WOMEN. By W. H. Byford, A. M., M. D., Professor of Gynecology in Rush Medical College and of Obstetrics in the Women's Medical College, etc., etc., and Henry T. Byford, M. D., Surgeon to the Women's Hospital of Chicago, Gynecologist to St. Luke's Hospital, etc., etc. Fourth Edition. Revised, rewritten and very much enlarged, with 306 illustrations. Philadelphia: P. Blakiston, Son & Co., 1888. 820 pages.

The book before us is a handsome volume in half morocco and gilt title and gilt edge, much more elegant in appearance than the majority of medical books. Yet the price is not higher in proportion. The next point that strikes the observer is the beauty and originality of the illustrations, quite a relief after seeing so many of the cuts in medical works copied or loaned and repeated in various editions till any beauty they may have possessed is worn out. Upon examining the text we find numerous improvements on the earlier editions, which recent advances in this branch had made necessary. The treatise is very systematic and so arranged as to chapters and sub-heads as to be easy of reference. It is evident that the writer is experienced daily in the subject of which he writes. The habit of instructing classes of students may account for his authoritative manner.

The opinions and methods of other writers and operators are always cited, and Byford's idea or modification is never omitted. The examination of the female pelvic organs is treated in detail and numerouslly illustrated. The mechanism of lacerations of the perineum and pelvic floor receives more attention than is usually bestowed, being discussed at length and some twenty-three varieties of laceration figured. Altogether the student will find this a very plain and explicit treatise and the practitioner will find it a definite and positive consultant.

A MANUAL OF MEDICAL JURISPRUDENCE WITH SPECIAL REFERENCE TO DISEASES AND INJURIES OF THE NERVOUS SYSTEM. By Allan McLane Hamilton, M. D., with Illustrations. New York: E. B. Treat, 771 Broadway, 1887. Price \$2.75.

This is just such a book as we should have expected from Dr. Hamilton, and it will take a high and permanent place in the literature of its class. The chapter titles will give but a poor idea of the real contents of the book, but they are as follows: "Insanity," "Insanity in Its Medico-Legal Relations," "Hysteroid Conditions and Feigned Diseases," "Epilepsy," "Alcoholism," "Suicide," "Cranial Injuries," "Spinal Injuries." The mass of the information is as instructive to the practitioner as a treatise on nervous diseases, and there are many points especially useful to examiners for pensions and life insurance. There is much sound advice to the medical witness which will aid many a physician when called to the stand, to avoid the snares of opposing counsel and testify with credit to himself and the profession.

NOTES AND COMMENTS.

THE NORTHEASTERN OHIO MEDICAL ASSOCIATION.

At the last meeting, in Akron, of this society the following officers were elected to serve the ensuing year:

President, Dr. B. B. Loughhead, Ravenna; first vice-president, Dr. A. E. Foltz, Akron; second vice-president, Dr. A. B. Campbell, Canal Fulton; recording secretary, Dr. C. W. Millikin, Akron; corresponding secretary, Dr. A. K. Fouser, Akron; treasurer, Dr. E. W. Howard, Akron.

The following standing committees for the year were appointed: Admissions—Drs. Starr, Fisher and Phillips.

Publication—Drs. Belden, H. G. Sherman and Campbell.

Finance—Drs. Conn, J. E. Dougherty and L. E. Sisler.

Ethics—Drs. L. S. Ebright, A. M. Sherman and W. T. Barnes.

Obituaries—Drs. Howard, Everhard and Wright.

Also the following appointments for next meeting—Es-sayist, Dr. N. S. Everhard; alternate, Dr. A. B. Campbell, lecturer, Dr. W. T. Barnes; alternate, Dr. E. W. Howard. Written report of cases, Drs. A. C. Beldin, L. E. Sisler, M. M. Bauer, D. B. Smith, A. W. Ridenour, James Fraun-felter.

Topics for discussion—"Physiological and toxic effects of Cinchona salts," to be opened by Dr. E. Conn; alternate, Dr. W. C. Jacobs.

The next meeting will be held in Akron.

The committee on obituaries read tributes of respect to the memory of the following deceased members: Dr. Mendall Jewett, H. C. Howard and Louis J. Proehl.

An important step in advance has been taken by the Medical Department of Western Reserve University in making the three years' graded course requisite for graduation, beginning with the session of 1888-9.

The Medical Department of Wooster University announces the opening of its regular course on Thursday, March 1. Dr. Arms will deliver the opening address at 8 o'clock Thursday evening, March 1, in the College amphitheatre.

A Towering Genius.—The genius of modern faith curers has appeared at Boston, and his name is Dresser. "Dr." Dresser announces that on receipt of a letter or telegram from a patient at any distance whatever he will promptly cure him. This method of curing at a distance was formerly the exclusive property of the Fathers of the Church, but iconoclastic Boston has stripped it of its sacerdotal character, and the plan is now the common property of ingenious charlatans.

The advantages that this variation of mind-healing offers over those in more common use are such as must commend it to all faith curers, Christian science practitioners, homœopaths, *et sui generis*, and they should hail "Dr." Dresser as the master spirit of the fraternity. It removes all the

fatigues and annoyances of a physician's life. He can keep his horse and buggy for pleasure excursions, rent out his office, sell his impressive exhibit of instruments, and need only retain his postoffice box and his telegraphic address. Besides this, the whole world lies at his feet. Wherever the mails go or the telegraph wires penetrate, he can treat his patients with the utmost ease and convenience. The longer one contemplates this plan of practicing medicine, the more admirable does it become. Certainly it is the perfection of quackery.—*Pittsburgh Medical Review*.

Diphtheria is treated at the Children's Hospital with perchloride of iron internally. Barlow advises the administration of small doses of mercurials if the tongue be coated. In Vienna all cases are treated locally with lactic acid, and cases of laryngeal or septic diphtheria were treated internally with calomel, and also with inunctions of mercurial ointment. Tracheotomy is here, as in all European hospitals, performed early. Last year about 49 per cent. of tracheotomies for laryngeal diphtheria recovered; this year, owing to the more malignant type of the disease, about 30 per cent. got well. Belladonna is employed here as a heart stimulant for this condition. In severe cases as much as ten drops of the tincture have been given every two hours with marked benefit. If the child be unable to swallow, nutrition is kept up by feeding through a nasal tube and by the use of nutrient suppositories of peptonized beef.—*Dr. Snow writing from London to Medical Press of Western New York*.

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Commencement day at Columbus Medical College will occur about March 15.

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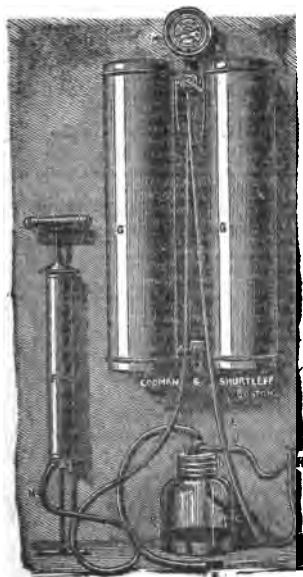
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Town Topics, the latest candidate for the favor of the Cleveland reading public, commenting on a humorous illustration occupying the entire first page of that journal, very pertinently says: "One may disclaim heresy in any form, and yet doubt that Christian science will either subdue an ulcerated tooth, or nullify the action of hydrocyanic acid; that it will knit a broken leg, mend a dislocated neck, or grow a finger to a stump; and one may doubt that it is destined to take the place of good sense and science—trifling obstructions to the progress of superstition and—to put it mildly—idiocy."

A successful winter session at the Western Pennsylvania Medical College, city of Pittsburgh, will close during the last week of March.

Bellevue Hospital Medical College closes its winter session about the middle of March, and immediately opens its spring session, which continues till the middle of June.

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[Form 3.]

Dr. S. Weir Mitchell says that "the books on mind cure are calculated to make much and serious evil. I have read them with much care and have always arisen from them with the sense of confusion which one would have if desired to study a pattern from the back of a piece of embroidery. I think that most trained intelligences will, with books like these mystical volumes, require an amount of care and thinking to avoid bewilderment of which the mass of men and women are not possessed. Every neurologist sees already some of its evil consequences, and I, myself, have over and over had to undo some of the evil it had done."—*American Lancet*.

John Woodall, the Barber-Surgeon.—In the time of Charles I., of England, one John Woodall, of the Company of Barber-Surgeons, was elected to fulfill the office of supervising and arranging the medicine-chests for the navy. He issued a treatise to accompany each chest, with directions how to use the remedies, and closed with the following advice to young naval surgeons:

" Let surgeon's mates, to whom I write,
Be warned by me, their friend,
And not too rashly give a dose,
Which then's too late to mend.

For many a good man leaves his life
Thro' errors of that kind,
Which I wish young men would avoid,
And bear my words in mind.

Tho' sulphur, salts and mercury,
Have healing medicine store,
Yet know they're poison, and can kill;
Prepare them well therefore."

Despite the seeming impertinence of this doggerel, Woodall was a right good surgeon in those days; he introduced the use of lemon-juice into the navy, for the prevention of scurvy, and tobacco-juice enemas for intestinal obstruction, the results of his own practical experience. He also devised the trephine, suggested amputation for gangrenous limbs, and the employment of ligatures on large trunks.

There is a copy of his book, 'Viaticum, the Pathway to the Surgeon's Chest,' in the British Museum in London.—*Medical World*.

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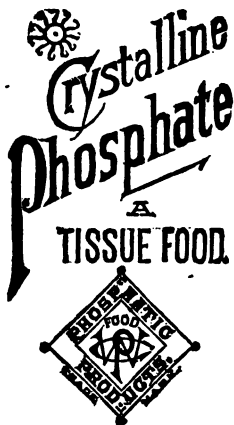
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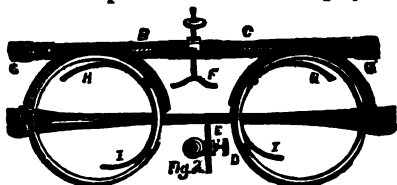
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